Q. What I'd like you to do is kind of walk through what the major components are of the boiler, please?
A. Okay. You have the steam drum. That's at the top left. That collects the tubes. You have the lower drum or the mud drum, that also collects the tubes. The boiler bank tubes themselves. The furnace. Water bank tubes. Outer wall tubes. This particular unit has a super heater.
Q. What's a super heater?
A. A super heater takes the steam as a vapor, adds more heat to it. It's in the flame, it's in the furnace. With the more heat, higher temperature, there's more energy available. That's usually, but not always, usually for driving a steam turbine. So it's a matter of adding more energy to that. This particular unit has a super heater. Then we show the seal casing, as we saw in the previous photographs.
Q. Is that in the right-hand portion of the photograph?
A. No, that's on the left-hand side here. The stiffeners, that are on top of that. Then there's insulation. And the lagging in that case. Lagging is the outer skin that covers the insulation.
Q. Now, is this the front wall right here in the front?
A. Yes.
Q. What's the purpose of the front wall?
A. The purpose of the front wall is to close the front end of the boiler and also to house the burner, that's the business

end.
Q. Now, are there pipes in the front wall?
A. On this particular unit there's no tubes, if that's what you mean. No, there's no tubes in the front wall.
Q. Are there ever any tubes in the front wall of the boiler?
A. Oh, yes, on a welded front wall.
Q. Now, is there any structural support that is provided by any of the walls?
A. Yes, the front casing and there's a comparable rear casing, the rear casing does not have a burner. Those are the two ends of the boiler that help hold the drums up, hold the boiler up. You have to have something to keep these drums separated and something to take a load of the boiler to the foundation. That's the front and rear casings.
Q. How many tubes are there typically in a Keystone boiler?
A. Oh, probably in one like this 100,000 pounds per hour, there's probably 1,500 tubes.
Q. Are there any other pieces or parts beyond the tubes?
A. That's just the start. You have two drums, 1,500 tubes, casing panels, stiffeners, insulation, lagging. That's not even getting to the burner. The piping, the water columns, the stuff that is required to control the boilers. So there is literally thousands of parts for each, there's so many systems to the boiler and there's thousands of parts total.
Q. How long does it take on average to assemble a Keystone

boiler?
A. Just the assembly you're probably looking at three months, just the assembly.
Q. Then in terms of the person hours to assemble a Keystone boiler?
A. About 3,000 hours.
Q. Is it easy to assemble?
A. Not really, that's why there are boilermakers. They're very skilled craftsman, they know their trade. They know the construction of the unit.
Q. What are the challenges in assembling a Keystone boiler?
A. The challenges is to make sure that it's puts together properly, so that it will hold the pressure inside the boiler, you certainly don't want that to get loose. A boiler can be very dangerous. You have high temperature, high pressure steam. If things are not expanded into the drum and welds aren't done properly, that those skills aren't very good, then you'll have leaks. Those leaks can be fatal or they can cause a major failure, which a boiler can explode.
Q. Leaks of what?
A. Steam and water.
Q. How about the relationship of one part or a series of parts to other parts in the boiler, how does that play into the assembly process?
A. With any boiler and particular the package boiler, each

part is integral, each part interacts with the other parts of the boiler and plays a certain role. You can't -- each part has to integrate with that because it is packaged, you have to make sure they fit together properly. So that when it gets to the field it will operate.

Q. What are some of the consequences that can happen if the boiler isn't properly assembled, it isn't properly manufactured and assembled?

A. You can have steam leaks. You can have burns through the casing. The gas temperatures in the furnace are over 2,500 degrees. If you have the casing leak or something that is improper, you actually have flames coming out of the side of the boiler, and that is extremely dangerous. It also may not make enough steam, a customer bought the product to make a certain amount of steam to do whatever he needed with his process or his turbine. If it doesn't make enough steam, he's not going to be successful.

Q. Are there any cost considerations that are associated with assembly?

A. Yes. Each part of the assembly is integral, we work on that to get the cost and get the most efficient way to build a part, so it's built properly and safely. It also economically, if it's not economical, you can't sell the boiler, there's nothing there to market.

Q. Can you generally describe, hopefully using this diagram,

what the flow is of the water through the boiler?
A. It's a unique, it's what they call a natural circulation boiler. In other words, there's only a pump to get the water into the boiler. After that it's the way the boiler absorbs heat in various portions of the boiler, that causes the water to circulate. The front end of the boiler, the furnace tubes are all what we call risers. They're hot, they're exposed to the flame. So the water flows from the lower drum up through those tubes into the steam drum. As the gases flow toward the rear of the boiler, the back end, they're still very hot, they haven't lost a lot of the heat yet because they have the flow through all these tubes. Each area that they flow through reduces the temperature of the gases. That heat that's absorbed by the tubes generates the steam. So steam rises, we call it a riser in the back end of the boiler. So it takes water from the lower drum, turns to steam as it goes through the tubes and goes into the upper drum where the steam is released. At the front end of the boiler, by this time the gases have lost a lot of their heat. It's cooler, the front end of the boiler, the water sinks down into the lower drum. So if you look at this here, it's kind of a counterclockwise rotation of the way the water that flows from the front of the lower drum to the rear of the lower drum, up the risers, across the upper drum, from the rear to the front, and then down the down covers in the front. It's a complex methodology but

that's what keeps the water circulating in the boiler and it releases the steam in the drum and that goes to whatever the use for the steam is.

Q. Does the design of the boiler affect what that flow is through the boiler?

A. Oh, absolutely. If you don't size the boiler in the surfaces, in the spaces between the tubes properly, not only will you not efficiently generate steam, it could be bad enough that if you don't manufacture it properly, that the circulation stops. If it stalls, the tube just continues to heat, generate steam, it's not getting the water properly, then you'll have a tube failure, you'll have a leak.

Q. What's the water temperatures for the waters going through the boiler?

A. It depends on the pressure, usually it's anywhere from say 400 to 600 degrees.

Q. And then how much --

A. Fahrenheit.

Q. Then how much heat is the boiler itself generating?

A. What do you mean to the surrounding the outside?

Q. Correct. Interior and then?

A. Well, the insulation keeps the heat inside the boiler. The boiler itself loses a little bit of heat to the outside. You should be able to walk up and touch the casings of the boiler, that's when you have it properly insulated. But boiler

rooms are hot.
Q. What is heat transfer?
A. Heat transfer is the means of taking a gas at a temperature, transferring that heat to the tube wall, the metal wall, that heat then is transferred to the water inside the tube. So each one of those, that process is called heat transfer.
Q. Is heat transfer a consideration of the design of the boiler?
A. It's the first consideration.
Q. How so?
A. You design a boiler based on the steam requirements. You design the heat transfer part of it, that's the number of tubes, the spacing between the tubes, how long the tubes are. Then you take, after the heat transfer, that's how big the boiler is going to be. Then I say okay, now based on the pressure of the boiler and the steam inside that boiler, how thick do the drums have to be, how thick do the tubes have to be to maintain that pressure inside this containment. So that's determined by ASME code, as was referenced earlier. ASME code says look, if you have this pressure, you have this diameter of tubes, this is how thick the drum has to be, these are the tube materials and the drum materials that you use.
Q. Now, historically had all those calculations been done for the Keystone so that you know, based on experience, what

the proper thicknesses and spacing ought to be in the boiler?
A. Yes.
Q. Now, what about loss of heat, is that a consideration in the design?
A. Yes.
Q. How so?
A. If you lose too much heat, it's not being used to generate steam. Heat going through the casings just makes the boiler room hot. And also could make the casings dangerously hot that someone could come up and brush against them and get burned. So you keep the heat inside the unit by water cooling all the surface that you can. Or the surfaces that are protected by insulation, you have enough thickness of insulation. That you protect the casings from getting too hot.
Q. You mentioned the term water cooling, what do you mean by that?
A. Water cooling means it has tube surfaces cooling it.
Q. How does a tube surface cool?
A. The water flows through the tubes and absorbs the heat.
Q. Now, what's the consequence to the motor of one of these boilers, if the boiler is experiencing a loss of heat during its operation?
A. He may still be able to make capacity, in other words, make enough steam. But he's going to have to burn more fuel to get there. So kind of like getting lousy gas mileage, I think

it's the same thing. It's not efficient, so you're burning a lot more fuel.

Q. Now, does tube spacing have an effect on loss of heat or --

A. As an absorption of the heat, you design the unit for a certain gas temperature leaving the boiler. And if you don't have the proper spacing between the tubes, number of tubes, length of tubes, all the physical characteristics, you're not going to achieve that temperature, and you're not absorbing the heat from the gas or from the oil that you're burning. You lose efficiency.

Q. And how is efficiency measured?

A. Percent.

Q. Percent of what?

A. Percent of fuel input.

Q. Now, are there any gases that are generated during operation that are of concern?

A. The combustion of carbon or hydrocarbon fuels mainly generates carbon dioxide and moisture. Because the hydrogen in the fuel mixes with the oxygen when you burn it to make moisture, steam vapor on the inside. That's the primary products of combustion, with the hot air and flue gases that go through the unit. However, if the combustion is not done properly, you end up with carbon monoxide, which is carbon that hasn't been fully burned. Okay. And you end up with what they

call hydrocarbons, which is carbon and hydrogen atoms combined together that hasn't been properly burned. Those are all pollutants. So the front end of the boiler, where the burner is, the wind box, all that, that combustion process, how it occurs in the furnace, how big that furnace is, all contributes to completely burning the fuel and doing it with the minimum amount of pollutants.

Q. Is the Keystone designed in such a way that it takes into account the possibility of carbon monoxide or carbon dioxide forming during operation?

A. Yes, it is. Through the turbulence of the burner primarily, also making sure that the furnace is tightly sealed.

Q. Now, when you're talking about tightly sealing a furnace, what does that mean?

A. Well, it could be either tightly tangent tube or if it has to be absolutely sealed for extremely low emissions, we could actually seal weld the tangent tubes together and put a bead of weld between those tubes, and seal weld it almost drum to drum. So that means the gases can't escape through any gaps between the tubes. Or you can also do a membrane wall.

Q. And then how does a steel welded tangent tube, in your view, compare to a membrane wall, in terms of sealing of the furnace to prevent gases from escaping?

A. They're quite comparable. Even the burner manufacturers say if you seal weld the furnace tubes or go with membrane

walls, they'll still guarantee the emissions.
Q. Is guaranteeing emissions important?
A. Very much so.
Q. Why.
A. To operate a boiler today, you have to get an operating permit. That operating permit says look, here's what I want to do -- you can even see these in the legal section of the paper. And it will say they're applying for a permit for an emissions source. Any boiler is an emissions source. The idea here is to minimize the pollutants. The permit will say you can only have so much carbon monoxide, so many nitrogen oxide. So many emission of pollutants. To achieve that, you have to have the right combination of boiler and burner to do that. And we outsource our burners, so the burner guy says well, I can make that, but you've got to have a real tight furnace, therefore, will seal up the furance or go to a membrane wall to do that.
Q. Well, is there any design information that's given to the burner manufacturer to assist in the selection of an appropriate burner for the Keystone?
A. That burner manufacturer says I want to see what your furnace looks like, I want to see how big it is, is it sealed. All those are required information by that burner manufacturer, including the fuel and capacities and so forth that he has to meet, before he will offer even a bid or offer you a quote for a burner.

Q. Any confidentiality agreement?
A. Yes. Each of the burner manufacturers --
MR. SHEEAN: Objection, your Honor, this is speculation. He can't speak to this, he hasn't laid the foundation.
THE COURT: Are you asking him whether his company has confidentiality agreements?
MR. GISLESON: Correct.
THE COURT: Overruled.
BY MR. GISLESON:
Q. Does Indeck Keystone enter into confidentiality agreements with burner manufacturers?
A. Yes, they do.
Q. Do the predecessors of Indeck Keystone enter into confidentiality agreements with burner manufactuers?
A. I'm told they did.
MR. SHEEAN: Objection, hearsay, your Honor.
THE COURT: Sustained.
BY MR. GISLESON:
Q. In terms of --
MR. SHEEAN: Move to strike, your Honor.
THE COURT: Struck.
BY MR. GISLESON:
Q. In terms of computer software, is there any software that is associated with the operation of a Keystone boiler?

A. Yes, we have computer software that we rate the boilers. We take the physical parameters of the boilers, put it into the program, put in the fuels and say okay at different loads what do the temperatures look like, what are the draft losses through the boiler, in other words, how much energy is lost by the flue gases flowing through the boiler. This information is given to the client, as well as the burner manufacturer, to size other parts of the boiler.

Q. Now, when you're talking about rating a boiler, what does that mean?

A. It gives you another set of calculations at different steam flows, other than the design flow.

Q. What's the information that is being generated, what does it tell you?

A. It tells you flows, temperatures -- draft losses.

Q. Can you desribe generally what the design considerations are when it relates to boiler safety?

A. Boiler safety, the boiler safety system, as we describe it, is called the burner management system. The burner management system is like a control on your furnace that tells the sequence of operation and makes sure that the pilot is lit before it lights the main burner. It's a similar system but much more complex on a boiler. That goes through a sequence of lighting it off and making sure at each one of those points that the burner is lit properly, the flame is stable, that it's

not going to flame out on you or allow an accumulation of combustible gases to collect in the furnace that could become explosive. So the safety, the safety feature is called the flame safeguard system or burner management system. That makes sure that the boiler operates safely. Then there's other safety systems that are part of that that makes sure it has water in it. You can't run a boiler without water. You can, but you'll melt it down, then you got a real problem.

Q. Was safety taken into consideration with respect to the development of the Keystone design?

A. Throughout.

Q. Approximately, how many Keystones have been sold over the course of its history?

A. I believe over 2,000.

Q. What's your estimate as to the number, in terms of percent, that are still in operation?

A. Probably 60 percent.

Q. Now, in materials of the different boiler types, A, O and D, which of those does the O compete against?

A. The O competes against the A and the D.

Q. Are there any other O boiler manufacturers in the marketplace?

A. Yes, there are.

Q. Can you identify any of them?

A. Victory Energy is one. Nebraska makes an O boiler. I

think Holman makes an O boiler. Some of those were already shown.

Q. Did any of your competitors for an O boiler ever provide, to your knowledge, to Indeck Keystone the detailed designs for its boilers?

A. I'm sorry.

Q. To your knowledge, has any of the other manufacturers, the Holman, the Nebraska, for example, ever provide to Indeck Keystone it's detailed designs for its O-type boilers?

A. Never.

Q. Did Indeck Keystone, setting aside the existence of the License Agreement, ever provide any of the detailed Keystone designs to any of its competitors?

MR. SHEEAN: Objection, foundation.

THE COURT: Overruled.

THE WITNESS: Not that I know of.

BY MR. GISLESON:

Q. Why not?

A. Why do we want to give away our designs, our methodologies, that make our boiler better than theirs.

Q. Wait a minute, aren't all boilers the same, whether it's an O boiler, an A boiler or a D boiler?

A. Not at all.

Q. Why not and how not?

A. We compete against the other two boilers with the

O boiler, we elected to stay with the O boiler because of its capability of responding to load change. The fact that -- meaning it's a hot rod. Instead of starting slow and bringing it up slowly and bringing it back down, the O boiler you can start and run it quickly. You can bring the O boiler up to full load in five minutes. There's not other boilers that can do that. That doesn't sound like much, but five minutes is fast when you're talking 200,000 or 300,000 pounds of steam an hour, and you're hot rodding a boiler that's bigger than your house. However, not the other designs, the As and the Ds can't quite respond that quickly. So we have an advantage there. We also have an advantage with the O boiler in that it's symmetrical, so that the load is split on vertical center lines. So when you ship it, when you put it on a foundation, it stays dead center. You don't have to counterbalance it, because like a D boiler, the furnace is on one side, which is light, and the boiler bank is in the middle between the drums, so it's lopsided. The Keystone, there's no real right hand or left land, as far as the boiler proper itself is concerned. Whereas, with a D boiler, you do have a right and a left hand boiler. Also, any stack or heat transfer equipment above the boiler, like an economizer, which is another water filled set of tubes with fins on it that preheats the water, so it takes more heat and recovers more heat from the flue gases to minimize your fuel expenditure. With the Keystone, you just go

straight up, it's very easy to arrange. It doesn't have to be off to the side, as you would with a D boiler. So it takes up less room in the boiler room. So that type of thing we decided back in 1950 and continued that on through today, that the O boiler has a competitive advantage because of that.

Q. Now, have you had occasion over the course of your career to discuss the reputation that the Keystone has with third parties not employed by one of your employers?

A. Yes, with my clients, exactly. A lot of them, they love their boilers, that's why I'm servicing --

MR. SHEEAN: Objection, hearsay, judge.

THE COURT: Let me see you at side bar.

(At side bar on the record.)

MR. GISLESON: I'm going to the reputation of Keystone in the marketplace. In order to get reputation, it's necessary to go into what feedback there has been, his understanding of what the marketplace says about the Keystone.

THE COURT: Are you asking what his customers have told him --

MR. SHEEAN: That is for the truth of the matter asserted.

MR. GISLESON: No, because I think it's important to establish the Keystone reputation in the industry and what the reputation is. I can just ask him if he has an understanding of what the reputation is in the industry. But the concern is

there wouldn't be a foundation for it. So I'm trying to lay a foundation for reputation.

THE COURT: Do you have anyone else that is going to come in and say, anyone else, any customers or otherwise, not employed by Indeck, that will express an opinion?

MR. GISLESON: I was going to do it through Mr. Swabb or Mr. Seibel, given their long history, they'll talk about the feedback and what the general reputation in the marketplace is.

THE COURT: What's wrong with that?

MR. SHEEAN: What's wrong with it is it goes to the truth of the matter asserted, judge. The fact that he thinks it's important to his case doesn't make it less hearsay.

THE COURT: First of all, I don't want to slice this too finely, it is for the truth of the matter asserted. And, furthermore, this doesn't address the hearsay objection, as a practical matter, what difference does it make what the reputation of your boiler is?

MR. GISLESON: It goes to the Keystone trademark.

THE COURT: Then prove it up, sustained.

(End of discussion at side bar.)

BY MR. GISLESON:

Q. How long has the boiler been known as a Keystone?

A. Since its inception in 1950.

Q. From 1950 to the present, has the Keystone name been

continuously in use?
A. Yes.
Q. Do you have an understanding as to why the boiler's named the Keystone?
A. Well, we're the Keystone state, Pennsylvania. Keystone is the keystone in an arch, that's why we're the Keystone state, from the Colonial days. We did that in honor in 1950 of Pennsylvania being the Keystone state, we also include that in our current company name. We're very proud of that name.
Q. I was going say, how did the company view the Keystone name and its role in the company's operations?
A. Because of the Keystone being the cornerstone of our state, the keystone, if you will, of our product line for many years and the fact that it's probably, we can consider it the premiere industrial boiler, obviously we're kind of partial. But we've kept the name, its name recognition, when we say a Keystone, it's associated with an old boiler.
Q. In what sort of written materials does Indeck Keystone use to the Keystone name?
A. All of the sales brochures, all of the written materials.
Q. Does the name ever get placed on the boiler itself?
A. Yes.
Q. How about historically, was the Keystone name ever placed on the boilers that were sold?
A. Yes. As a matter of fact, one of the pictures that you

had showed the Keystone nameplate. It has the keystone shape on the nameplate as well. So it's very easily recognizable.

Q. And where on the boiler is that located?

A. Right up front, it's usually right on top of the wind box.

Q. Would you please pull up photograph PH13. Can you describe what this photograph shows?

A. That is the front end of an older Keystone. The burners, the round piece in the front, right above the burner is the Keystone nameplate.

Q. Why is the Keystone nameplate on the front of the boiler?

A. We want everybody to see it, remember it.

Q. I want to ask you about the Keystone standard M-Series, which is what the jury heard about during opening statement. What is the standard M-Series?

A. Keystone standard M-Series is series of boiler cross-sections that will take you from roughly 20,000 pounds per hour of steam all the way up to 165,000 pounds per hour.

Q. When you talk about a cross-section, what do you mean?

A. When you look at the end of the boiler, that's the shape of the furnace, the boiler bank tubes and the outer wall tubes.

Q. When you're talking about the characteristics of the Keystone standard M-Series, what do you view as the defining characteristics?

A. The standard M-Series is a tangent furnace wall. Tangent

outer wall. The front and rear walls are made with refractory and insulation materials. They are not welded walls.

Q. When you're talking about refractory, what is refractory?

A. Refractory is like a high temperature in concrete.

Q. What's the purpose of the refractory?

A. To actually refract or reflect the heat back into the furnace. It's not an insulator, it reflects the heat back into the furnace. The layers between that and the steel casings are meant to insulate between the furnace temperatures and the outer wall.

Q. Anything else?

A. That's all that's there.

Q. Now, in terms of the word standard in the name standard M-Series, to what does that refer?

A. Those various cross-sections, lengths, and that construction. There's a series of data sheets, what we call our KD data sheets, show what that standard series is.

Q. Are there drawings pertaining to that standard series?

A. Yes, there are.

Q. What's the purpose of the drawings?

A. They're standard drawings for customer's use, for sales, as well as a full set of standard fabrication drawings, something to make the boiler in the shop from.

Q. Why are there standard drawings?

A. We don't have to make them each time.

Q. Now, were changes ever made to the standard M-Series?
A. Over the years, yes.
Q. What were the reasons for the changes being made over the years?
A. Most of the changes reflected if we did find a problem, we upgraded to correct that problem.
Q. So the changes were based on actual experience?
A. Yes, and manufacturability, sometimes we found it was easier to do something a little different in the shop.
Q. Now, was there an engineering design guide for the Keystone?
A. Yes.
Q. What was the purpose of the engineering design guide?
A. The purpose of any design guide and for the Keystone, for this product line, this is how you do it. You size the furnace this way. You do your boiler bank this way. This is how you set the design pressure, so forth. The idea is to get some uniformity to it. Even though it's a custom boiler, this is how you do each segment of the boiler. This way you assure what you have learned over the years, the experience, that that's rolled in, the manufacturability has been rolled into that. The safety has been rolled into that. All the codes, the standards that we have to abide by. That's all rolled into the standards so that when we do it, everybody does it the same way.

Q. I'd like to show you Exhibit P23, please. It's a Precise 699. It's in your binder in case you want to look. Who was involved with developing the Keystone engineering design guide?

A. That was primarily authored, I should say compiled by Ted Fuhrman.

Q. What position did he have?

A. He was like the head of combustion engineering, head combustion engineer at that time, I believe. He changed positions enough times that I can't remember what title he was at that point.

Q. And over what period of time was the engineering design guide for the Keystone created?

A. I believe he was doing that, the design guide in the '02, '03 era, I'm not sure of the exact date.

Q. In the 2002 --

A. I'm sorry, in the 2002, 2003, somewhere in that area, I believe.

Q. Did the Keystone engineering design guide change over time?

A. I don't know, I wasn't part of it.

Q. Now, was the Keystone engineering design guide something that Indeck Keystone Energy or, to your knowledge, any of its predecessors ever published it on its Web site?

A. No, never.

Q. Was that ever put out in a book?

A. No.
Q. Why not?
A. There's a lot of, we'd kind of give away the entire recipe for the Keystone if we do. And variations of the Keystone.
Q. What do you mean by variations of the Keystone?
A. In other words, it will describe refractory wall, it will describe what we do for welded wall. Describes what we do for super heated units. It describes what we do for all the variations that we could think of, that you can do to a Keystone boiler. And if we gave that away why we'd have nothing to market, everybody knows exactly what we were doing with prices and such.
Q. In your view, are there any competitive advantages associated with the engineering design guide?
A. Yes, making sure that we do things the same way, we don't make mistakes. And to make sure that hopefully everything that is shown in the design guide is the most efficient way of doing it. Therefore, the most cost effective.
Q. The most cost effective from what perspective?
A. Manufacturing.
Q. How about from a performance perspective?
A. Oh, sorry as well, that's true. You can make a boiler too big. Then you wouldn't be cost competitive.
Q. Is there a section in the engineering design guide on the

standard M-Series?
A. I believe so.
Q. If we could look at the table of contents, please. Section 16?
A. There it is.
Q. And if you could please go to Precise 777. Can you see the tab for Section 16?
A. Yes.
Q. If you could go to this page. Now, do you see in the lower right-hand corner, the reference to KEB, you referenced this series of letters before, what does KEB mean?
A. KEB is a KB data sheet, Keystone data sheet. That's the revision at that time.
Q. And what's the information that's contained in the Keystone data sheets or KEB sheets?
A. Most of the data sheets show general dimensions so that if we do select a boiler for a particular client, we can say okay, this is a 7M Keystone. These are what the dimensions of the 7M Keystone is so we can put it into this plan. It's kind of catalog information.
Q. And on this page, it refers to general arrangement, what's a general arrangement drawing?
A. That's the outside dimensions. When you stand outside and look at the boiler, here's what it looks like and here are the dimensions of the boiler.

Q. If you can go please to page 780. Now, this refers to 14M through 23M. Whereas, the prior one was 3M through 13M, so what's the significance between the two?

A. The 3M through 13M, they're small enough units that you can actually mount the combustion air fan, that's the fan that takes the outside air, pressurizes it and shoves it into the burner for the combustion. That you can mount right on the wind box. So that the fan, the wind box, the whole thing just sits on one foundation. Just one block, there it is. If you look at this page here, the combustion air fan is off to the left. It's too big to mount on the boiler. So we mount it off to the left, and we connect it to the boiler with a duct. So we made the division there on those drawings to say look, this looks different than the other one, there's another foundation you have to be concerned with that takes up more room. Therefore, here's what it looks like.

Q. If you can go to page 781, please. Can you describe what's shown on this page? And I will point out that you've got a pen on the monitor that you could use to write on the screen, your monitor on the left.

A. Okay.

Q. Can you describe what's shown on this page, please?

A. This particular page is, if you took the arrangement drawings that we showed on the previous page and actually sliced through the boiler, so you say well that's what it looks

like from the outside, what does it look like on the inside. If you take a vertical slice through the boiler, it will look like this view here. That shows that it's an old boiler, shows what the tubes look like, the furnace tubes, the boiler bank tubes, the outer wall tubes.

Q. Now, what's the information that's shown in this lower portion of the drawing; if you can circle that, please?

A. That portion right there?

Q. That one, along with the other two, what is shown in those sections?

A. These are large views of areas of interest for the -- if you look up above, that's a section as if you sliced horizontally through the boiler and you look down on it. These views down below show certain sections that are enlarged because it's too hard to see on the other view.

Q. What's the tube configuration?

A. The configuration, the first one on the left shows where the soot blower would be. A soot blower is if you're burning oil and it leaves some soot behind, you want to be able to clean it while the boiler is on line. You can't always shut the boiler off to clean, you got to keep operating the boiler. So this blows steam to clean the soot off the tubes. This shows what the tubes look like around where the soot blower is. The next section is if you don't have a soot blower, it says look, you don't have one there, it's just a gap, a hole in the

boiler bank.
Q. Are those membrane wall tubes, tangent tubes --
A. Those are tangent tube furnace and tangent outer wall because that's what the M-Series is.
Q. Now, how can you tell from looking at this drawing that the tubes are tangent?
A. They're right up against each other, there is no gap.
Q. And then looking in the upper right-hand corner, there's some information there, can you describe what's shown in that corner?
A. Right above that it shows that as an engineering standard, gives the date that it was issued, and that Bob Seibel in the back row signed off on it.
Q. That's the RVS?
A. Yes, sir.
Q. Going to the next page, is this a tube arrangement for the 7M through 9M?
A. Yes.
Q. And is this tangent tube or membrane wall, according to the drawing, the KEB sheet?
A. Tangent tube.
THE COURT: Mr. Gisleson, we're going to take our break here.
MR. GISLESON: Yes, your Honor.
THE COURT: Members of the jury, remember what I had

told you earlier, that you're not to talk about the case. Don't talk to anybody about the case. The only time you're really going to start talking about the case is when you go back and start deliberating. We're going to start probably most days at 9 o'clock sharp.

Now, I can't remember if I told you this, but if I didn't, I'm telling you now. We are not going to hold court on Friday because I have another commitment that requires me to be elsewhere. So for your planning purposes, fare warning we will not be here. But I wanted you to know that.

Does counsel have anything they need to bring up with me before the end of the day, before we leave?

MR. GISLESON: No, your Honor.

MR. SHEEAN: No, your Honor.

THE COURT: All right, we're in recess until 9 o'clock tomorrow.

(Whereupon, at 4:48 p.m., the Jury Trial proceedings adjourned for the day.)

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C E R T I F I C A T E

I, Ronald J. Bench, certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

Ronald J. Bench